

## SOME LEAF-MINING CHRYSOMELIDS OF LANTANA (COLEOPTERA)

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The following observations were made on several species of the genera *Octotoma* and *Uroplata* (Uroplatini) mining leaves of *Lantana* species of the *camara* type during the past several years. The attractive West Indian shrub *Lantana camara* var. *aculeata* (L.) Moldenke is an important pest of ranch lands in Hawaii and other tropical countries. Several species of the miners were sent to Hawaii for release, and two of these, *Octotoma scabripennis* Guérin and *Uroplata girardi* Pic, are now established.

It seems likely that other species of Uroplatini will be found on *Lantana* spp. in tropical America.

Determinations of the insects discussed were made by specialists of the Entomology Research Division, U. S. Department of Agriculture. Propagation, testing and release in Hawaii were carried on by Q. C. Chock, C. J. Davis and other members of the staff of the Entomology Branch, State Department of Agriculture (formerly Board of Agriculture and Forestry).

### *Octotoma gundlachi* Suffrian

A few adults were seen on *Lantana* leaves at the Bosque de Habana, Havana, Cuba, in April and May 1952, and larvae were observed mining the leaves in May. The adults feed on the leaves. The chalcid *Spilochalcis odontotae* Howard was reared from pupae (Krauss, 1953). In April 1953, 87 of the adult beetles were sent to Honolulu. In June 1956 several adults found on *Lantana* leaves at San Vicente, Viñales Valley, Cuba, were collected and forwarded to Honolulu. None of these were released. Patricia Vaurie (Vaurie, 1956) has published observations made in Cuba on this insect.

### *Octotoma* sp. probably *plicatula* (Fabricius)

Adults of this species were seen on *Lantana* at Zamorano, Honduras, altitude about 2,400 ft., in September 1953. Fifty-seven were sent to Honolulu and three were released at Hookena, island of Hawaii, on May 10, 1954. It is not known to be established. Adults were seen on *Lantana* at Turrialba, Costa Rica, in September 1953, at Cartago, Costa Rica, in November 1953, at Veracruz, Mexico, in June 1955, and at Cordoba, Veracruz, Mexico, in September 1955. Larvae were observed in mines in *Lantana* leaves at Guatemala City, Guatemala, in August 1953 and at Chilpancingo, Guerrero, Mexico, in August 1955.

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*Octotoma scabripennis* Guérin

Most of my observations on this species were made at Cuernavaca, Morelos, Mexico, elevation 5,000 ft. The adults were numerous on *Lantana glandulosissima* Hayek leaves from June to September, larvae from July to August, and pupae in August and September. The flattened adults are about 7 mm. long, rugose and black in color, with a brownish tinge to the upper surface of the thorax. Larvae are flattened and whitish or yellowish in color, and the pupae in the mines are yellowish. There are sometimes two or three mines in a single leaf. The adults feed on the upper surfaces of the leaves, leaving characteristic scars. This insect was also found on *Lantana* at Veracruz and Cordoba in the State of Veracruz, at Revolcadero in Guerrero, and at Oaxaca and Mitla in Oaxaca. *Octotoma* sp., probably *scabripennis*, was observed at San Salvador, Santa Tecla, and Santa Ana, El Salvador on the same plant. In August 1955 I found larvae, pupae and adults on *Lippia umbellata* Cav. (Verbenaceae) at Cuernavaca, Mexico. The parasites *Spilochalcis* sp. (Chalcidae) and *Calliephialtes* sp. (Ichneumonidae) were reared from larvae in Mexico in 1955.

The first shipment of *Octotoma scabripennis* (adults and larvae) were sent to Honolulu from Cuernavaca, Mexico, by John Mann, Entomologist of the Queensland, Australia, Department of Public Lands, and the writer in July and August 1953, and Mann sent additional material in September. The writer sent further shipments from Cordoba, Mexico, in May and June 1955, and from Cuernavaca in July 1955, August and September 1955 (many larvae, pupae and adults), June and July 1959 (many adults), and August 1959 (many larvae, pupae and a few adults). The first release was made at Kunia, Oahu, in November 1953 and further releases were made on Oahu, Hawaii, Kauai, and Molokai later. The insect was not found established until August 1963, when it was observed at White Sands, Kona, island of Hawaii. It has not yet been found on the other islands.

*Uroplata fulvopustulata* (Baly)

Larvae in leaf mines on *Lantana* and adults on the leaves were collected at Summit, Panama Canal Zone, in June and July 1953. The braconid *Bracon* sp. was reared from larvae in July. In December 1953 larvae, pupae, and adults were found at Gamboa, Summit, and Pedro Miguel in the Canal Zone, and at Nata and Pedregal in the Republic of Panama. Many were found in a small plant growing in partial shade at Gamboa. Adults were noted on plants at Summit, C.Z., in November 1961, a larva in a mine at São Paulo, Brazil, in March 1954, and a number of adults on *Lantana* leaves at Revolcadero, Guerrero, Mexico, in July 1959. Larvae and adults of *Uroplata* sp., probably *fulvopustulata*, were seen on plants at São Paulo, Brazil in April 1961. Adults, larvae, and pupae were sent to Honolulu from the Canal Zone and Panama in December 1953; adults from Revolcadero, Mexico, in July 1959; and larvae, pupae and adults (of *U.* sp. probably *fulvopustulata*) from São Paulo in April 1961; but none of these shipments was released. This species is known from Mexico, Guatemala, Costa Rica, Panama, Venezuela, and Brazil.



*Uroplata girardi* Pic

This is a species recorded from Brazil, Paraguay, and Argentina. I found it at Vitoria, Espirito Santo, Brazil, in July 1961. Larvae and pupae in mines in the leaves and adults on the leaves of *Lantana* were found mostly on plants in shaded areas. The eulophid parasite *Dicladocerus* sp. was reared from larvae. One lot of adults and immature stages of the beetle was sent to Honolulu. Releases were made in Lawai Valley and Grove Farm, Kauai, beginning in December 1961. The beetle is well established now in Lawai Valley. A larva was found in a mine at Recife, Pernambuco, Brazil, in October 1961. *Uroplata* sp., probably *girardi*, was observed at Asuncion, Paraguay, in July 1961; there were larvae and pupae in mines and adults on the leaves.

## LITERATURE CITED

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## LITERATURE NOTICE

THE GENUS *BARIS* GERMAR IN CALIFORNIA (COLEOPTERA, CURCULIONIDAE). By Edward E. Gilbert. Univ. Calif. Publ. Ent. 34:1-153, illus. 1964.—This treatment of the stem borers has sections on morphology, biology, distribution, and systematics. Host preferences are discussed at length. Thirteen California species are described, illustrated, and keyed in the adult, pupal, and larval stages when available.